

# ALINCO



VHF/UHF AMATEUR RADIO DIGITAL TRANSCEIVER

## DR-MD520T/E

T:145/222/440MHz

E:144/430MHz



■ Built-in GPS receiver with APRS support

■ Automatic Repeater Roaming

■ DMR Tier I and Tier II

■ MAX output power 55W(VHF) / 40W(UHF)

■ 4000 channels, 250 zones, 250 scan lists

■ 500,000 Digital contact list

■ Large 1.77 inch full color LCD display



GPS Receiver  
Built-in



Real Two-slot  
DMR



Plenty of  
Text Messages



Digital Voice  
Recorder

APRS is a registered trademark of Bob Bruninga, WB4APR.

[www.ALINCO.com](http://www.ALINCO.com)



## Versatile features

### Common to Digital and Analog modes



- 4000 channels, 250 zones, 250 scan lists
- Displays DMR ID, Call sign, Name and Geographical info
- Allows CSV export/import of setting parameters
- Easy import of DMR contact database (entire world wide)
- Single or dual channel selectable
- FM broadcast receiver with 100 memory channels and VFO
- Manually programmable Side and Hot keys
- Automatic date and time calibration by GPS
- X-band repeat, Analog uplink/Digital downlink or vice versa (T-version only)
- Emergency alarm
- Mixed Mode Operation: Automatically detects and switches between analog and digital modes depending on the signal received
- Recording time 4 Hours
- Automatic date and time calibration by GPS

### Digital mode

- 10,000 Talk Groups, 250 Radio ID, 500,000 contact lists
- Displays the Caller ID and name
- Selective calls including Individual, Group or All
- Digital Monitor function to receive signals without matching ID or color codes
- Plenty of Text Messages 100 pre-programmable short messages of up to 200 characters each, capable of editing through the keys without using a PC

### Analog mode

- Variety of signaling; CTCSS/DCS/DTMF/ 2-TONE/5-TONE encode and decode
- Four different Tone-burst tones
- Programmable Auto Repeater Shift in VFO mode
- Kill & Stun functions

## Specifications

### General

Frequency Range (DR-MD520T)	RX: 136MHz-174MHz, 220MHz-225MHz, 400MHz-480MHz 108MHz-137MHz (AM) 76MHz-108MHz (WFM) TX: 144MHz-148MHz, 222MHz-225MHz, 420MHz-450MHz
Frequency Range (DR-MD520E)	RX: 136MHz-174MHz, 400MHz-480MHz 108MHz-137MHz (AM) 76MHz-108MHz (WFM) TX: 144MHz-146MHz, 430MHz-440MHz
Operating model	16K0F3E/11K0F3E/7K60FXD/7K60FXE
Number of Channels	4000 channels
Channel Spacing	Analog: 12.5/25KHz Digital: 12.5KHz
Zones per Radio	250 zone (MAX 250ch/zone)
Operating Voltage	13.8V DC $\pm 15\%$
Operating Temperature Range	-20~+60°C
Frequency Stability	$\pm 2.0$ ppm
Antenna Impedance	50Ω
Dimensions (WxHxD Approx)	141x40x188 mm (5.55x1.57x7.40 inches)
Weight (Approx)	1.04kg /36.68 ounces
Recording time	4 Hours
Current drain	15 A max.

### Transmitter

RF Power Output	145MHz: 55W/25W/10W/1W 223MHz: 5W / 1W (Only T version) 435MHz: 40W/25W/10W/1W
Channel Spacing	Less than 1GHz: -36dBm More than 1GHz: -30dBm
FM Hum & Noise (Analog)	25kHz: 40dB 12.5kHz: 36dB
Adjacent channel power	-80dB

### Receiver

Sensitivity (Analog/12dB SINAD)	25kHz: 0.25uV 12.5kHz: 0.35uV
Sensitivity (Digital/BER)	6%: 0.3uV 1%: 0.7uV
FM Hum & Noise (Analog)	25kHz: 45dB 12.5kHz: 40dB
Audio Distortion	$\leq 5\%$
Audio Output	2W / 8Ω

Cellular frequencies blocked on T-version.

### Standard Accessories

Microphone	Mobile Bracket	DC Cable
EMS-88 with DTMF keyboard	ADFM78	ADUA38 with Fuse Holder
Spare Fuses (15A) 2pcs	Hardware Kit for Bracket	Mic Hanger
	ERW-21 PC Interface Cable	EA-0289 GPS-Antenna



Standard accessories declared herein are our factory default and may vary at moment of sales depending on the market and Dealers' sales policy.

Authorized Dealer:

**Caution** Please be sure to read the instruction manual before using the product for your safety.



• An amateur radio license is required to operate this product.

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